IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 – 3. (Canceled)

Claim 4. **(Currently Amended)** A method according to claim 23, wherein step f) further comprises comparing demodulated symbols with known symbols to provide an estimate of the symbol error rate.

Claim 5. **(Previously Presented)** A method according to claim 4, wherein step a) includes down converting the received signal to a nominal 0Hz intermediate frequency.

Claim 6. **(Previously Presented)** A method according to claim 5, wherein step a) further includes digitizing the intermediate frequency signal to provide a digitized symbol stream in a complex signal domain.

Claim 7. **(Previously Presented)** A method according to claim 6, wherein step e) includes, removing the estimated mean beat frequency from the signal and storing the mean beat frequency in a database.

Claim 8. **(Original)** A method according to claim 7, wherein step e) further includes estimating residual phase shift of the signal and storing the estimated residual phase shift of the signal in the database.

Claims 9 -11. (Canceled)

Claim 12. **(Previously Presented)** A method according to claim 23, further including the step of using training sequences and correlation peaks for multi-path compensation.

Claim 13. **(Previously Presented)** A method according to claim 12, wherein channel estimation of data sequences are used for multi-path compensation.

Claim 14. **(Previously Presented)** A method according to claim 23, wherein step f) further comprises comparing demodulated symbols with known symbols to provide an estimate of the symbol error rate.

Claim 15. **(Previously Presented)** A method according to claim 13, wherein step a) includes down converting the received signal to a nominal 0Hz intermediate frequency.

Claim 16. **(Previously Presented)** A method according to claim 15, wherein step a) further includes digitizing the intermediate frequency signal to provide a digitized symbol stream in a complex signal domain.

Claim 17. **(Previously Presented)** A method according to claim 2, wherein step f) further comprises comparing demodulated symbols with known symbols to provide an estimate of the symbol error rate.

Claim 18. **(Previously Presented)** A method according to claim 17, wherein step a) includes down converting the received signal to a nominal 0Hz intermediate frequency.

Claim 19. **(Previously Presented)** A method according to claim 18, wherein step a) further includes digitizing the intermediate frequency signal to provide a digitized symbol stream in a complex signal domain.

Claim 20. **(Currently Amended)** A method of regenerating a remotely transmitted signal comprising a symbol stream modulated onto a carrier in accordance with a predetermined standard, the method including the steps of:

a) receiving the remotely transmitted signal having known characteristics;

b) determining frame timing of the received signal;

c) identifying the locations of one or more training sequences within the signal from the frame timing, the one or more training sequences including eight training sequences associated with data bursts and a ninth training sequence associated with dummy bursts containing no data;

d) identifying the structure of the training sequences;

e) estimating phase shift values at the locations of the sequences;

f) demodulating the symbol stream using the structure of the sequences;

g) correcting the symbol stream by incorporating substitution of symbols in the symbol stream where prior knowledge of the symbol stream exists; and

~~g)~~h) remodulating the symbol stream using the phase shift values,

wherein the training sequences include synchronization signals and frequency correction bursts.

Claim 21. **(Previously Presented)** A method according to claim 20, further including the step of using training sequences and correlation peaks for multi-path compensation.

Claim 22. **(Previously Presented)** A method according to claim 21, further including the step of using channel estimation of data sequences for multi-path compensation.

Claim 23. **(Currently Amended)** A method of regenerating a remotely transmitted signal comprising a symbol stream modulated onto a carrier in accordance with a predetermined standard, the method including the steps of:

a) receiving the remotely transmitted signal having known characteristics;

b) determining frame timing of the received signal;

c) identifying the locations of sequences within the signal from the frame timing;

d) identifying the structure of the sequences;

e) estimating phase shift values and mean beat frequency at the locations of the sequences;

f) demodulating the symbol stream using the structure of the sequences;

g) correcting the symbol stream by incorporating substitution of symbols in the symbol stream where prior knowledge of the symbol stream exists; and

~~g)~~h) remodulating the symbol stream using the phase shift values and the mean beat frequency,

wherein the sequences include one or more training sequences, synchronization signals, frequency correction bursts and dummy bursts containing no data and the training sequences include eight training sequences associated with data bursts and a ninth training sequence associated with dummy bursts containing no data.

Claim 24. **(New)** A method of regenerating a remotely transmitted signal comprising a symbol stream modulated onto a carrier in accordance with a predetermined standard, the method including the steps of:

a) receiving the remotely transmitted signal having known characteristics;

b) determining frame timing of the received signal;

c) identifying the locations of sequences within the signal from the frame timing;

d) identifying the structure of the sequences;

e) estimating phase shift values and mean beat frequency at the locations of the sequences;

f) demodulating the symbol stream using the structure of the sequences;

g) remodulating the symbol stream using the phase shift values and the mean beat frequency; and

h) using training sequences and correlation peaks for multi-path compensation,

wherein the sequences include one or more training sequences, synchronization signals, frequency correction bursts and dummy bursts containing no data and the training sequences include eight training sequences associated with data bursts and a ninth training sequence associated with dummy bursts containing no data.

25. (New) A method according to claim 24, wherein channel estimation of data sequences are used for multi-path compensation